

CLAIM AMENDMENTS

Please amend claims 1, 3 to 7, 9 to 13, 15, 17 and 18 as follows:

1. (Currently Amended) An optical system comprising first and second optical lenses arranged so as to have coinciding or substantially coinciding optical axes, wherein:

said first optical lens has a substrate comprised of an optical material;

said substrate has a convex portion serving as a convex lens and an outer circumference portion positioned around said convex portion;

a thickness of said substrate at said outer circumference portion is greater than a thickness of said substrate at said convex portion; and

the outer circumference portion of said first optical lens and an outer circumference portion of said second optical lens are fixed in place relative to each other so that said convex portion of said first optical lens faces said second optical lens.

2. (Original) An optical system as set forth in claim 1, wherein:

the outer circumference portion of said first optical lens faces the outer circumference portion of said second optical lens; and

a facing surface of said outer circumference portion of said first optical lens and a facing surface of said outer circumference portion of said second optical lens are flat or approximately flat.

3. (Currently Amended) An optical system as set forth in claim 2, wherein:

a facing surface of said outer circumference portion of said first optical lens is vertical or substantially vertical with respect to the an optical axis of said first optical lens;

a facing surface of said outer circumference portion of said second optical lens is vertical or substantially vertical with respect to an optical axis of said second optical lens; and

the a facing surface of said outer circumference portion of said first optical lens and the a facing surface of said outer circumference portion of said second optical lens are bonded together.

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4. (Currently Amended) An optical system as set forth in claim 1, wherein:

said first optical lens further comprises a flat portion positioned around said convex portion;

said outer circumference portion is positioned around said flat portion; and

a thickness of said substrate at said outer circumference portion is greater than a thickness of said substrate at said flat portion.

5. (Currently Amended) An optical system as set forth in claim 1, wherein the outer circumference portion of said first optical lens and the outer circumference portion of said second optical lens are bonded via an intermediate member so that said convex portion of said first optical lens faces said second optical lens.

6. (Currently Amended) An optical system as set forth in claim 1, wherein:
said second optical lens has a first convex portion on one surface, a second
convex portion on another the other surface opposing facing said one surface, and an outer
circumference portion positioned around said first and second convex portions, and center axes
of said first and second convex portions coinciding or substantially coinciding; and
the outer circumference portion of said second optical lens and the outer
circumference portion of said first optical lens are fixed in place relative to each other.

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7. (Currently Amended) A method of producing an optical system having first and
second optical lenses, wherein:
said first optical lens has a substrate comprised of an optical material; and
said substrate has a convex portion serving as a convex lens and an outer
circumference portion positioned around said convex portion, a thickness of said substrate at the
outer circumference portion being greater than a thickness of said substrate at said convex
portion;
comprising the step of bonding together with an adhesive said outer circumference
portion of said first optical lens and an outer circumference portion of said second optical lens so
that optical axes of said first and second optical lenses coincide or substantially coincide.

8. (Original) A method of producing an optical system as set forth in claim 7,
further including the step of mounting the outer circumference portion of said

second optical lens on said outer circumference portion of said first optical lens and positioning said first and second optical lenses so that said optical axes coincide or substantially coincide;

a mounting surface of said outer circumference portion of said first optical lens being flat or approximately flat; and

a bottom surface of said outer circumference portion of said second optical lens being flat or approximately flat.

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9. (Currently Amended) A method of producing an optical system as set forth in claim 8, wherein:

the mounting surface of said outer circumference portion of said first optical lens is vertical or substantially vertical with respect to the optical axis of said first optical lens; and

the bottom surface of said outer circumference portion of said second optical lens is vertical or substantially vertical with respect to an the optical axis of said second optical lens.

10. (Currently Amended) A method of producing an optical system having first and second optical lenses, wherein:

said first optical lens has a substrate comprised of an optical material; and
said substrate has a convex portion serving as a convex lens and an outer circumference portion positioned around said convex portion, a thickness of said substrate at the outer circumference portion being greater than a thickness of said substrate at said convex portion;

comprising the step of bonding together said outer circumference portion of said first optical lens and an outer circumference portion of said second optical lens so that optical axes of said first and second optical lenses coincide or substantially coincide as set forth in claim 7, wherein:

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said first optical lens further comprises a flat portion positioned around said convex portion;

said outer circumference portion of said first optical lens is positioned around said flat portion; and

a thickness of said substrate at said outer circumference portion of said first optical lens is greater than a thickness of said substrate at said flat portion.

11. (Currently Amended) A method of producing an optical system having first and second optical lenses, wherein:

said first optical lens has a substrate comprised of an optical material; and
said substrate has a convex portion serving as a convex lens and an outer
circumference portion positioned around said convex portion, a thickness of said substrate at the
outer circumference portion being greater than a thickness of said substrate at said convex
portion;

comprising the step of bonding together said outer circumference portion of said first optical lens and an outer circumference portion of said second optical lens so that optical axes of said first and second optical lenses coincide or substantially coincide as set forth in claim

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wherein said outer circumference portion of said first optical lens and said outer circumference portion of said second optical lens are bonded via an intermediate member so that the optical axes of said first and second optical lenses coincide or substantially coincide.

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12. (Currently Amended) A method of producing an optical system having first and second optical lenses, wherein:

said first optical lens has a substrate comprised of an optical material; and
said substrate has a convex portion serving as a convex lens and an outer circumference portion positioned around said convex portion, a thickness of said substrate at the outer circumference portion being greater than a thickness of said substrate at said convex portion;

comprising the step of bonding together said outer circumference portion of said first optical lens and an outer circumference portion of said second optical lens so that optical axes of said first and second optical lenses coincide or substantially coincide as set forth in claim

7,

wherein said second optical lens has a first convex portion on one surface, a second convex portion on another the other surface opposing facing said one surface, and said outer circumference portion positioned around said first and second convex portions, and center axes of said first and second convex portions coinciding or substantially coinciding.

13. (Currently Amended) An optical pickup, comprising:

a laser;

an optical system for focusing laser light from said laser on an optical disk; and

a photodetector for receiving said laser light reflected at said optical disk;

wherein:

said optical system comprises first and second optical lenses arranged so that their optical axes coincide or substantially coincide;

said second optical lens passes the laser light from said laser and supplies it to said first optical lens;

said first optical lens has a substrate comprised of an optical material;

said substrate has a convex portion for focusing laser light from second optical lens on said optical disk and an outer circumference portion positioned around said convex portion;

a thickness of said substrate at said outer circumference portion is greater than a thickness of said substrate at said convex portion; and

the outer circumference portion of said first optical lens and an outer circumference portion of said second optical lens are fixed in place relative to each other so that said convex portion of said first optical lens faces said second optical lens.

14. (Original) An optical pickup as set forth in claim 13, wherein:

said outer circumference portion of said first optical lens faces the outer

circumference portion of said second optical lens; and

a facing surface of said outer circumference portion of said first optical lens and a facing surface of said outer circumference portion of said second optical lens are flat or approximately flat.

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15. (Currently Amended) An optical pickup as set forth in claim 14, wherein:

a facing surface of said outer circumference portion of said first optical lens is vertical or substantially vertical with respect to the optical axis of said first optical lens;

a facing surface of said outer circumference portion of said second optical lens is vertical or substantially vertical with respect to an the optical axis of said second optical lens; and

the facing surface of said outer circumference portion of said first optical lens and the facing surface of said outer circumference portion of said second first optical lens are bonded together.

16. (Original) An optical pickup as set forth in claim 13, wherein:

said first optical lens further comprises a flat portion positioned around said convex portion;

said outer circumference portion is positioned around said flat portion; and

a thickness of said substrate at said outer circumference portion is greater than a thickness of said substrate at said flat portion.

17. (Currently Amended) An optical pickup as set forth in claim 13, wherein the outer circumference portion of said first optical lens and the outer circumference portion of said second optical lens are bonded via an intermediate member so that said convex portion of said first optical lens faces said second optical lens.

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18. (Currently Amended) An optical pickup as set forth in claim 13, wherein:
said second optical lens has a first convex portion on one surface, a second convex portion on another ~~the other~~ surface opposing facing said one surface and an outer circumference portion positioned around said first and second convex portions, and center axes of said first and second convex portions coinciding or substantially coinciding, and the outer circumference portion of said second optical lens and the ~~an~~ outer circumference portion of said first optical lens are bonded together.